

### **REMARKS**

Applicant notes that the Examiner has withdrawn the finality of the Office Action mailed October 3, 2003. Therefore, this response is to a non-final office action. Applicant thanks the Examiner for her thorough review of this application.

Claims 8, 14, and 16 stand rejected under 35 USC 112, first paragraph. The examiner states that the claims are drawn to soybean seeds and tissue culture produced from soybean seeds wherein one parent plant of the seeds is not described in the specification; thus the identity of the seeds remain unclear. Claim 8 has been amended to overcome this rejection by limiting the claimed seeds to those “produced by self-pollinating and growing the plant according to claim 2 or 5.” The seed produced by the selfed plant will be identical to the seed of claim 1 and when planted will produce a plant of claim 2. The seed and plant of claims 1 and 2 are fully described in the specification. Applicant submits that amended claim 8 overcomes the 35 USC 112, first paragraph rejection and is in allowable condition.

Applicant respectfully disagrees with the Examiner’s rejections of claims 14 and 16. Claim 14 is directed to a “tissue culture of regenerable cells” obtained from the plant produced by growing the deposited seed of claim 1 or to a plant having all the physiological and morphological characteristics of the plant produced by growing the deposited seed of claim 1. The regenerable cells obtained from either of these plants contain the same genetic makeup as the deposited seed or if grown into plants, possesses the same phenotypic characteristics of a plant grown from the seed of claim 1. The seed of claim 1 are fully described in the specification and enabled by the deposit and the phenotypic characteristics of plants grown therefrom are also fully described. Therefore, Applicant respectfully submits that the subject application fully describes and enables the invention of claims 14 and 16. (The arguments supporting patentability of claim 16 are the same as the arguments Applicant makes in support of claim 14.) There is no need under 35 USC 112, first paragraph, to describe a “second parent plant,” wherein the “second parent plant” is not an element or otherwise part of the subject matter of claim 14 or 16. In view of the above remarks, Applicant respectfully requests that the Examiner withdraw her rejection of claims 14 and 16. The Examiner should note that these types of claims are currently being issued by the USPTO.

Claim 36 stands rejected under 35 U.S.C. 112, second paragraph. Claim 36 has been amended to overcome this rejection. The antecedent basis for the “said progeny soybean seed” can be found in lines 3 and 4 of claim 36. Applicant respectfully submits that amended claim 36 is in allowable condition.

Claims 1-5, 8, 14, 16-17, 36-37 are rejected under 35 USC 102(b) as anticipated or, in the alternative, under 35 USC 103 as obvious over Rhodes (1999, US Patent 5,294,666).

Claims 1-35 also stand rejected under 35 USC 102(b) as anticipated or, in the alternative, under 35 USC 103 as obvious over Luzzi (2000, US Patent 6,084,159).

Applicant respectfully submits that there are significant differences between the soybean cultivar 9392379521283 (1283 cultivar) of the ‘666 patent, the soybean cultivar 9524889614923 (4923) of the ‘159 patent and the claimed soybean line S52-U3 and provides the following remarks and the enclosed Rule 132 Affidavit of Glen R. Bowers in support of patentability.

First, the 1283 cultivar of the ‘666 patent is resistant to *Phytophthora* races 1-9 (Column 5) resulting from the presence of the Rps1-k gene in its genome. In significant contrast, S52-U3 does not have any Rps genes in its genome. The table on page 17 of the S32-U3 specification refers to tolerance or field resistance and should not be confused with race specific resistance. The second page of the enclosed University of Minnesota Extension Service publication MR-05615 1998, Variety Trials Soybean, includes Table I lists the various Rps genes and their respective race resistances. The publication confirms that resistance to *Phytophthora* root races is genetically different from “field resistance,” which is not race specific.

Second, the relative maturity of S52-U3 is significantly earlier than the relative maturity rating of 1283 and the 4923 cultivars as established by multi-year and multi-location trials. As Dr. Bowers makes clear in his 132 Affidavit, the relative maturity dates of the 1283 and 4923 cultivars can be compared to the RM of S52-U3 based on the specifications of the respective patents and application and also based on published marketing information pertaining to the sale of the 1283 and 4923 cultivars.

The ‘666 patent and the Applicant’s specification show that the maturity dates of the 1283 and S52-U3 cultivars were compared with the maturity date of the Asgrow A5547 variety. The data shows that S52-U3 matured on October 8 and A5547 matured on October 11 (8 locations of data). This reflects a 3-day or 0.3 change in relative maturity (RM). A one tenth change in RM is considered significant in the industry. In the 1997 data as disclosed in Table 2

of the '666 patent, the 1283 cultivar is one day earlier in maturity than A5547. This would give the 1283 cultivar a RM of 5.4.

The Relative Maturity of the 1283 cultivar is disclosed in published information used to market and sell this cultivar to the public. The 1283 cultivar was marketed under the variety name "AG5401". The variety name identifies (by its first two numerals) that the 1283 cultivar has a RM of 5.4.

The specification discloses that the soybean cultivar S52-U3 is three days earlier in maturity than the Asgrow variety A5547, which would make it a RM 5.2. The cultivar name S52-U3 indicates to the consumer that its maturity rating is 5.2. As discussed by Dr. Bowers, a difference of 0.2 in RM is significant in the industry. The RM rating is so important that the industry incorporates the rating into the cultivars' names so that farmers can base their purchase, in part, by referring to the cultivar name itself.

Third, the relative maturity of the soybean cultivar S52-U3 is significantly earlier than the relative maturity rating of 4923 cultivar of the '159 patent. Although S52-U3 was not directly compared with any of the varieties that the 4923 cultivar was compared to as shown in Table 1 of the '159 patent (A5959, AG5901, AG5602, and AG5801), the data presented in Table 1 of the '159 patent specification establishes that its relative maturity was relatively high compared to S52-U3. For example, Table 1 shows that the cultivar 4923 is 1 (AG5901) or 2 (A5959) days later than RM 5.9 lines, 2 days later than a RM 5.8 line (AG5801), and 5 days later than a RM 5.6 line (AG5602). This information, taken collectively, indicates that the 4923 cultivar is either a RM 6.0 or 6.1. The 4923 cultivar was marketed as CSR6002N and advertised as having a RM of 6.0. Therefore, based on the data contained in the '159 patent specification and the published information pertaining to the '4923 cultivar, it is clear that the relative maturity of the soybean cultivar S52-U3 (5.2) is significantly earlier than the relative maturity of the 4923 cultivar (6.0).

Finally, as Dr. Bowers discusses in his affidavit, although the environment can change the days to maturity from trial to trial, the data from multiple trials, when taken together, take into account the environmental differences and allow those skilled in the art to differentiate between complex traits. While the calendar date for maturity can change in different environments, the relative difference between the maturity of any two varieties is fairly constant. Applicant therefore respectfully submits that S52-U3 is significantly different than the 1283 cultivar of the '666 patent and the 4923 cultivar of the '159 patent.

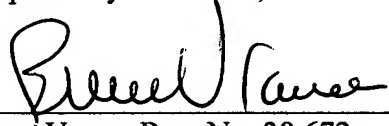
In view of the above remarks and the 132 Affidavit of Dr. Bowers, Applicant respectfully submits that the soybean cultivar S52-U3 is not anticipated and is non-obvious in view of the '666 and '159 patents, and requests that the Examiner withdraw the rejections based on 35 USC 102(b) and 35 USC 103.

If any additional information is needed, the Examiner is invited to call the undersigned attorney at (919) 541-8614.

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Respectfully submitted,

  
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